

Table 4-3: 2020 Orange Hazard Mitigation Prioritized Action Plan

Action Type	Action Description	Hazards Addressed	Responsible Department / Board	Estimated Cost	Potential Funding Source	Estimated Timeframe	Benefits: Society (S) Infrastructure (I) Environment (E)	2014 Priority 2020 Priority	Current Status
Local Plans & Regulations	Identify possible storage locations for emergency equipment that can be shared by Town Officials. Once identified, develop a management program to utilize the shared storage spaces and equipment during emergencies.	All Hazards	Emergency Management Director, Fire Chief, Police Chief	Low-Medium	Town	Year 1	S, I	2020 High	New action item based on needs identified by Orange's emergency personnel during the MVP workshop.
Critical Facilities & Infrastructure	Hire a consultant to determine appropriate flood proofing measures for the wastewater treatment plant, which is located within the floodplain.	Flooding, Hurricanes	Emergency Management Director, Orange Wastewater Treatment Facility Staff	Medium-High	Town, MVP	Year 2	I	2020 High	New action item based on vulnerabilities identified during the Town's MVP workshop.
Critical Facilities & Infrastructure	Conduct a town-wide assessment of drainage structures and drainage driven flood issues to determine where upgrades should be made, especially in the downtown area.	Flooding, Hurricanes, Severe Thunderstorms	Planning Board, Emergency Management Director	Medium	Town, MVP	Year 2	I	2020 Medium	New action item based on vulnerabilities identified during the Town's MVP workshop.
Local Plans & Regulations	Continue to review and update, as appropriate, Town land use regulations to include climate resiliency provisions such as Best Management Practices for River Corridor areas (FRCOG's River Corridor Toolkit), further restricting or limiting new development within the 100-year floodplain and River Corridor, Low Impact Development (LID) stormwater practices, etc. Special attention should be paid to the Mill Buildings throughout Town, as many are in line to be redeveloped and are under private ownership. The National Fire Protection Association's "Firewise" standards should also be incorporated into this update to reduce the impact of wildfires on the built environment.	All hazards	Planning Board	Low	Department of Housing and Urban Development, Town, Volunteers	Year 1	S, I, E	2020 Medium	New action item.
Local Plans & Regulations	Continue to participate in the Franklin County Regional Emergency Planning Committee (REPC), which is currently working to complete and operationalize the Debris Management Plan. Coordinate with state and regional agencies to identify a location(s) in the Town for the temporary storage of contaminated and/or hazardous flood debris.	Multiple Hazards	DPW, Franklin County REPC	Low	MVP, Town	Year 0-1, to be reviewed annually and implemented in subsequent years (Years 2-5), as appropriate.	S, E	2020 Medium	New action item. Orange currently has two locations for debris collection: brush and wood debris are collected at the transfer station, and logs are collected at the Highway Department. As REPC continues to develop a debris management plan, the Town can coordinate with the Committee.

Table 4-3: 2020 Orange Hazard Mitigation Prioritized Action Plan

Action Type	Action Description	Hazards Addressed	Responsible Department / Board	Estimated Cost	Potential Funding Source	Estimated Timeframe	Benefits: Society (S) Infrastructure (I) Environment (E)	2014 Priority 2020 Priority	Current Status
Public Education & Outreach	Continue to distribute outreach materials to residents that explain how to safely dispose of household hazardous waste at designated municipal collection sites. Additionally, continue to publicize the biannual collection dates.	Flooding, Manmade Hazards	Emergency Management Director, Department of Public Works, Health Department	Low-Medium	MVP, Town	Year 2	S, I, E	2020 Medium	New action item. The Town of Orange is a part of the Franklin County Solid Waste District, which hosts 2 collection dates per year with 4 collection sites set up in the county. Collection efforts in the past have been successful and the Town would like to continue to promote education and outreach.
Critical Facilities & Infrastructure	Identify Town-owned forested areas that are at higher risk for wildfires (near residential areas, high-wire utilities, etc.) to implement climate resilient forest management practices that reduce the risk of fire hazards (such as the removal of slash).	Wildfire	Conservation Commission, Planning Department, Fire Department	Low-Medium	MVP, Town, DCR	Year 3	S, I, E	2020 Low	New action item. This is a low priority because there are not many Town owned forested areas. Recent wildfires in Town were located on Tully Mountain, which is a state owned property. The Town is working to coordinate access for fires on state owned properties, but ultimately is not responsible for debris management.
Critical Facilities & Infrastructure Public Education & Outreach	Develop a contingency plan for the Town's designated emergency shelters and disseminate this information to appropriate Town departments, as well as Town residents. When evaluating facilities as options for public shelters, assess vulnerability to severe hazards and determine any necessary retrofitting measures. Conduct public education and outreach so residents know which locations are appropriate for sheltering, and know which number to call for updated information in an effort to minimize calls to the 911 operator during a severe weather event. Consider developing an emergency hotline to use in concert with the CodeRED system so residents can get on demand updates.	All hazards	Building Inspector, Emergency Management Director, Director of Community Development	Low	Town	Year 0-1, to be reviewed annually and implemented in subsequent years (Years 2-5) as appropriate	S	2014 Medium 2020 High	Carried forward from the 2014 plan and updated for the 2020 plan. The Town's schools are designated emergency shelters, but they will soon be under construction and other sheltering locations will need to be evaluated. The Director of Community Development will conduct a reuse study of the Butterfield School, which could potentially be used as a shelter.

Table 4-3: 2020 Orange Hazard Mitigation Prioritized Action Plan

Action Type	Action Description	Hazards Addressed	Responsible Department / Board	Estimated Cost	Potential Funding Source	Estimated Timeframe	Benefits: Society (S) Infrastructure (I) Environment (E)	2014 Priority 2020 Priority	Current Status
Education & Awareness	Improve public awareness of the risk of high wind events. Provide information to property owners on how to properly install temporary window coverings before a storm and appropriate wind retrofits for existing buildings.	Tornadoes, Severe Wind	Emergency Management Director	Low	Town, Volunteer Time	Year 0-1, to be reviewed annually and implemented in subsequent years (Years 2-5), as appropriate.	S, I	2014 Medium 2020 High	Carried forward from the 2014 plan and updated for the 2020 plan. The Fire Department can get weather information from their own weatherbug station and quickly put out warnings. The Fire Chief would like to work on public education and outreach before the 2020 hurricane season starts.
Education & Awareness	Conduct ongoing education on fire safety, such as the Firewise Communities/USA Program, which encourages and acknowledges actions that minimize home loss to wildfire.	Wildfire	Fire Department	Low	Town	Year 0-1, to be reviewed annually and implemented in subsequent years (Years 2-5) as appropriate	S, I, E	2014 High 2020 High	Carried forward from the 2014 plan and updated for the 2020 plan. The Fire Department participates in National Fire Awareness Week activities the first week in October. This year, the Fire Chief would like to adjust the curriculum to reflect what is going on nationally in terms of wildfire risk.
Critical Facilities & Infrastructure/ Local Plans & Regulations	Consider hiring a consultant to map Fluvial Erosion Hazard (FEH) areas in town, and adding a Fluvial Erosion Hazard Area Overlay District bylaw to the zoning bylaws to limit development in FEH areas along rivers and streams that are highly susceptible to flood-related erosion.	Flooding, Hurricanes	Planning Board	Medium	Town, FRCOG, MVP, HGMP	Year 1	S, I, E	2014 High 2020 High	Carried forward from the 2014 plan and updated for the 2020 plan.
Critical Facilities & Infrastructure	Develop a culvert management plan that identifies the locations of culverts in town, existing and potential issues and the extent of flooding caused at each location, and possible solutions. The plan should prioritize projects in the locations that require intervention, including South Park, Town Farm Road, and West River Street.	Flooding, Dam Failure	Highway Department, Conservation Commission	Medium	Town, MVP, Community Compact	Year 2	S, I, E	2014 Medium 2020 High	Carried forward from the 2014 plan and updated for the 2020 plan. The Town has many undersized and aging culverts and would like to know where they are located and begin prioritizing repairs and replacements.
Critical Facilities & Infrastructure	Develop a computerized tracking system for departments to record costs and property damages from natural hazard events. The tracking system will allow Town Departments to digitize and manage records as needed, and track assets. For example, the Tree Warden could use the	All hazards	Emergency Management Director, Highway Department, Fire Chief, Police Chief	Medium	Town, Volunteers	Year 2	S, I, E	2014 High 2020 Medium	Carried forward from the 2014 plan and updated for the 2020 plan. The Town selected a vendor for the tracking system but further efforts have been delayed due to the COVID-19

Table 4-3: 2020 Orange Hazard Mitigation Prioritized Action Plan

Action Type	Action Description	Hazards Addressed	Responsible Department / Board	Estimated Cost	Potential Funding Source	Estimated Timeframe	Benefits: Society (S) Infrastructure (I) Environment (E)	2014 Priority 2020 Priority	Current Status
	system to keep track of downed trees and make updates as issues are resolved.								pandemic. Next steps will include determining how to implement the system across Town departments, determining which records should be digitized first, and securing funds to complete this work. Acquiring fireproof cabinets could also be considered as a part of this action item so that scanned records can be properly stored.
Local Plans & Regulations	Continue to implement the Orange Open Space and Recreation Plan's Seven-Year Action Plan strategies, particularly those dealing with the protection of farmland, forestland, and floodplain forests. As a part of this review, consider identifying which parcels of open space could be used to develop resiliency.	Flooding	Planning Board, Board of Selectmen, Conservation Commission, Agricultural Commission	Medium	Town, Volunteers	Year 2	E	2014 Medium 2020 Medium	Carried forward from the 2014 plan and updated for the 2020 plan.
Critical Facilities & Infrastructure	Determine the feasibility of either replacing the oldest, western-most water main crossing the Millers River in order to mitigate the potential of the pipe being destroyed by flooding in the river, or finding a back-up drinking water supply on the north side of the Millers River.	Flooding	Water Department	Medium	Town	Year 2	S, I	2014 Medium 2020 Medium	Carried forward from the 2014 plan and updated for the 2020 plan. The Orange Water Department hired an engineer to design a new river crossing in FY '19, but have not yet received the completed design. The Water Superintendent is actively working on this project.
Education & Awareness	Provide training to volunteer board members and the Building Inspector about the risk of landslides and mitigating the risk through the enforcement of existing land use regulations (zoning bylaws, subdivision regulations, building codes) that direct development to stable slopes and soils to reduce the risk of landslides. Reduce the risk of landslides at existing development by requiring that surface water and groundwater are properly managed as part of the permit process.	Landslides	Building Inspector, Conservation Commission, Planning Board, Zoning Board of Appeals	Low	Town, Volunteers, DLTA	Year 0-1, to be reviewed annually and implemented in subsequent years (Years 2-5), as appropriate.	S, I, E	2014 Medium 2020 Medium	Carried forward from the 2014 plan and updated for the 2020 plan. The Community Development Director would like to assess how construction site management can be added to zoning bylaws to ensure there is oversight that will limit risks associated with landslides.

Table 4-3: 2020 Orange Hazard Mitigation Prioritized Action Plan

Action Type	Action Description	Hazards Addressed	Responsible Department / Board	Estimated Cost	Potential Funding Source	Estimated Timeframe	Benefits: Society (S) Infrastructure (I) Environment (E)	2014 Priority 2020 Priority	Current Status
Critical Facilities & Infrastructure	Identify feasible options, such as placing main feeder lines underground, to reduce risk to critical municipal facilities and infrastructure in areas where repetitive outages occur.	Hurricanes, Severe Wind, Severe Thunderstorms, Severe Winter Storms	Board of Selectmen, Planning Board, utility company	High	Town	Dependent on availability of Town staff	S, I	2014 High 2020 Low	Carried forward from the 2014 plan and updated for the 2020 plan.

Table 4-4: Orange Completed or Obsolete 2020 Hazard Mitigation Actions

Action Type	Action Description	Hazards Addressed	Responsible Department / Board	Estimated Cost	Potential Funding Source	Benefits: Society (S) Infrastructure (I) Environment (E)	Priority in Past Plan	Current Status	
Critical Facilities & Infrastructure	Rehabilitate the bridge connecting Wendell Depot Road and West Orange Road to improve emergency access.	All Hazards	Emergency Management Director, Select Board	Medium-High	Mass DOT	S, I	High	The need to rehabilitate the bridge was identified as an action item by Orange's emergency personnel during the MVP workshop in October 2019. As of the writing of this plan in August 2020, MassDOT is working to finish repairs and all work is expected to be completed by June 2021.	
Critical Facilities & Infrastructure	Ensure that utility companies implement five-year action plans, which include regular tree maintenance to reduce the number of limbs near overhead power lines, to reduce risk to infrastructure from high wind hazards.	Hurricanes, Severe Winter Storms, Severe Wind	Highway Department	Low	Town	S, I	High	Obsolete. National Grid completed tree maintenance on a regular basis and after storms – the Town cannot change their schedule.	
Local Plans & Regulations	Examine strategies for improving the Towns' existing hazard tree program, which currently completes tree work for residents outside of utility areas. Look for ways to improve the process of identifying tree hazards and to minimize conflict between the DPW and residents. Encourage coordination between Town departments and the Orange Tree Warden to foster safe and effective care of the Town's trees.	Hurricanes, Severe Wind, Severe Winter Storms	Highway Department	Low	Town	S, I, E	High	Completed. The Tree Warden works within the Town's budget to take down trees as needed, and does routine cleanups in the fall, winter, and late spring to mitigate issues.	
Local Plans & Regulations	The town should consider updating its current zoning and subdivision regulations, paying particular attention to flooding mitigation and prevention. Special consideration should be given to restricting or limiting new development within the 100-year floodplain and areas prone to localized or catastrophic flooding events.	Flooding	Planning Board	L	Town	I, E	High	The Town of Orange completed a complete revision of their Subdivision Rules and Regulations in November 2013. According to section 210-4.4 Subdivision Standards in the Floodplain, all proposals for development are now reviewed to confirm they will be reasonably safe from flooding.	

Table 4-4: Orange Completed or Obsolete 2020 Hazard Mitigation Actions

Action Type	Action Description	Hazards Addressed	Responsible Department / Board	Estimated Cost	Potential Funding Source	Benefits: Society (S) Infrastructure (I) Environment (E)	Priority in Past Plan	Current Status
Local Plans & Regulations	Revise the Definitive Plan requirements in the Subdivision Rules and Regulations to include identification of impacts and flooding mitigation measures.	Flooding	Planning Board	L	Department of Housing and Urban Development, Town, volunteers	E	High	Completed. Subdivision Rules and Regulations were updated in November 2013.
Local Plans & Regulations	To reduce the risk to infrastructure from high winds associated with hurricanes and tropical storms, consider amending the Subdivision Rules and Regulations to require utility lines be placed underground in all new subdivisions.	Hurricanes	Planning Board, Highway Department	L	Department of Housing and Urban Development, Town, volunteers	I	High	The Town of Orange completed a complete revision of their Subdivision Rules and Regulations in November 2013. Section 210-6.8 Utilities was revised to require that utility wires be placed underground, unless there is a special circumstance.
Local Plans & Regulations	Consider implementing standards to require temporary and permanent erosion control measures for streams and surface water bodies and prohibiting permanent alterations of watercourses or streams.	Flooding	Planning Board	L	Department of Housing and Urban Development, Town, volunteers	E	High	Completed. Zoning bylaws were updated in March 2015.
Local Plans & Regulations	Request FEMA to update the Flood Insurance Rate Maps (FIRM), which depict the 100-year floodplain, for Orange and other Franklin County towns. The current map for Orange was developed in 1982.	Hurricanes	Emergency Management Director, Board of Selectmen	L	Town	I, E	Medium	Obsolete. In 2018, FEMA initiated the process to update the floodplain maps for Franklin County Towns. This process will take 5-10 years to complete.
Education & Awareness	Participate in trainings, as needed, to ensure new buildings are designed and constructed to reduce the risk of damage from high winds. Encourage the construction of new homes with basements or crawl spaces to provide shelter during a tornado, hurricane or other storm event with high winds.	Tornados, Severe Wind	Building Inspector	Low	Town	I	High	Obsolete. Orange has their own Building Commissioner and this is considered part of the job duties.
Local Plans & Regulations	The town should evaluate whether to join FEMA's Community Rating System.	Flooding	Board of Selectmen, Conservation Commission	Low	Town	S, I	Medium	Obsolete. The Community Rating System is cost prohibitive for small towns.
Education & Awareness	Educate private dam owners of their inspection responsibilities, and work with significant hazard dam owners to prepare up-to-date evacuation plans.	Dam Failure	Board of Selectmen, Emergency Management Director, Water Department	Low	Town	S, I, E	Medium	Obsolete. This is the state's responsibility.
Critical Facilities &	Assess the ownership and maintenance needs for municipally owned dams, and the potential for dam removal. As a part of	Dam Failure	Board of Selectmen,	Low	Town	S, I, E	Medium	Complete. The Town does this.

Table 4-4: Orange Completed or Obsolete 2020 Hazard Mitigation Actions

Action Type	Action Description	Hazards Addressed	Responsible Department / Board	Estimated Cost	Potential Funding Source	Benefits: Society (S) Infrastructure (I) Environment (E)	Priority in Past Plan	Current Status
Infrastructure	this, Update dam inspections and update internal processes for tracking status & conditions. Ensure contact information for private dam owners is up to date.		Emergency Management Director, Water Department					

DRAFT